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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/511,931	02/24/2000	Takayuki Sugawara	9281-3561	5649

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EXAMINER

BAKER, STEPHEN M

ART UNIT	PAPER NUMBER
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2133

DATE MAILED: 03/27/2003

9

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/511,931

Applicant(s)

SUGAWARA ET AL.

Examiner

Stephen M. Baker

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 January 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-9 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

1. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 4-9 are rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention.

3. Regarding claim 4, the specification makes no mention of corrections being performed "on the fly".

Claim Objections

4. Claim 9 is objected to because of the following informalities: "red" apparently should be "read". Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
6. Claims 1-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,252,961 to Hogan (hereafter Hogan) in view of U.S. Patent No. 6,385,744 to Ando *et al* (hereafter Ando).

Hogan discloses a computer DVD system where DVD data error correction is performed at least partly by the host. The drive controller may also perform error correction on-the-fly.

Regarding claim 1, Hogan doesn't specify that the drive's on-the-fly ECC process be performed one sector at a time while the host's ECC process be performed over multiple sectors at a time. Hogan's on-the-fly correction presumably would progress along rows of the double-encoded DVD block shown in Hogan's Fig. 4.

Ando shows that it was well known in disk ECC for DVD to encode a higher level of ECC over multiple sectors of a lower level of ECC. Reading apparently progresses along rows of the double-encoded DVD block shown in Fig. 5 by Ando, and thus progresses a sector at a time. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Hogan's DVD drive system such that the drive's on-the-fly ECC process is performed sector at a time while the host's ECC process is performed over multiple sectors at a time. Such an implementation would have been obvious because Ando shows that it was well known in disk ECC for DVD to encode a higher level of ECC over multiple units of a lower level of ECC.

Regarding claim 2, Official notice is taken that the desirability of providing disk drives with the capacity to be compatible with a variety of disk formats and distinguish between the variety of disk formats was well known at the time the invention was made. A CD-ROM provides a "high-reliability disk" with an extra level of ECC compared to a CD. It would have been obvious to a person having ordinary skill in the art at the time

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the invention was made to implement Hogan's computer DVD system with a disk drive that can distinguish between DVDs, CD-ROMs and CDs and process their ECCs appropriately. Such an implementation would have been obvious because the desirability of providing disk drives with the capacity to be compatible with a variety of disk formats and distinguish between the variety of disk formats was well known.

Regarding claim 3, Official notice is taken that the desirability of providing ECC decoding for a variety of disk formats and of distinguishing between the variety of disk formats was well known at the time the invention was made. Official notice is also taken that providing information on a disk to distinguish the disk format was well known at the time the invention was made. It would have been obvious to a person having ordinary skill in the art at the time the invention was made to implement Hogan's computer DVD system with a disk drive that can distinguish between disk formats by information written to the disk, and that can process their ECCs appropriately. Such an implementation would have been obvious because providing information on a disk to distinguish the disk format was well known, as was the desirability of providing disk drives with the capacity to distinguish between formats and decode formats appropriately.

Regarding claims 5-7, each sector corresponds to a "physical address".

Regarding claim 8, both levels of error correction share "common" sectors.

Response to Arguments

7. Applicant's arguments with respect to claims 1-9 have been considered but are moot in view of the new grounds of rejection.

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
9. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

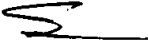
10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Stephen M. Baker whose telephone number is (703) 305-9681. The examiner can normally be reached on Monday-Friday (11:00 AM - 7:30 PM).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Albert DeCady can be reached on (703) 305-9595. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3800.



Stephen M. Baker
Primary Examiner
Art Unit 2133

smb
March 23, 2003